

WHAT IS CLAIMED IS AS NEW AND DESIRED TO BE SECURED BY LETTERS
PATENT OF THE UNITED STATES IS:

1. A semiconductor device comprising:

5 a first electrode gate group having a plurality of gate electrodes formed on a semiconductor substrate to be away from each other at first equal spacings;

source contact having a portion formed separated from a first gate electrode of the first electrode gate group by a second spacing greater than the first spacing; and

10 source regions for electrically interconnecting the first gate electrode group and the source contact.

2. The semiconductor device of Claim 1, wherein the source regions are connected to each other at one end of the first gate electrode group, and separated from each other at the other end of the first gate electrode group.

15 3. A semiconductor device comprising:

a first gate electrode group having a plurality of gate electrodes formed on a semiconductor substrate to be away from each other at first equal spacings;

20 a source contact portion formed separated from the first gate electrode group to be away from the first gate electrode groups at a second spacing; and

source regions for electrically interconnecting the first gate electrode group and the source contact,

25 wherein the source regions are connected to each other at one end of the first gate electrode group, and separated from each other at the other end of the first gate electrode group.

4. A semiconductor device comprising:

a first gate electrode group having a plurality of gate electrodes formed on a semiconductor substrate to be away from each other at first equal spacings;

a second gate electrode group having a plurality of gate electrodes formed on the semiconductor substrate to be away from each other at the first equal spacings:

5 a source contact portion between the first and second gate electrode groups to be away from the first and second gate electrode groups at a second spacing; and

source regions for electrically interconnecting the first gate electrode group and the source contact,

wherein the source regions are connected to each other at one end of the first gate
10 electrode group, and separated from each other at the other end of the first gate electrode group.

5. A semiconductor device according to claim 4, wherein the gate electrodes of the first group are connected to each other at the other end.

15

6. A semiconductor device according to claim 4, wherein the first and second gate electrode groups are formed in trench structures.

7. A semiconductor device according to claim 4, wherein each of the source regions
20 is a diffused layer formed on the semiconductor substrate.

8. A semiconductor device according to claim 4, wherein the source contact and the first gate electrode group constitute one MOS transistor.

9. A semiconductor device according to claim 4, further comprising a source electrode on the semiconductor substrate,

wherein the source contact portion is an electrode drawn from the source electrode.

5 10. A semiconductor device according to claim 4, wherein all the gate electrodes of the first gate electrode group are used as gates for a MOS transistor.

11. A semiconductor device comprising:

10 a first gate electrode group having a plurality of gate electrodes formed on a semiconductor substrate to be away from each other at first equal spacings;

a second gate electrode group having a plurality of gate electrodes on the semiconductor substrate to be away from each other at the first equal spacings;

a third gate electrode group having a plurality of gate electrodes formed on the substrate to be away from each other at the first equal spacings;

15 a first source contact portion formed between the first and second gate electrode groups to be away from the first and second gate electrode groups at a second spacing;

a second source contact portion formed between the second and third gate electrode groups to be away from one selected from the second and third gate electrode groups at the second spacing;

20 first source regions which electrically interconnect the first gate electrode group and the first source contact portion; and

second source regions which electrically interconnect the second gate electrode group and the second source contact,

25 wherein the first source regions are connected to each other at one end of the first gate electrode group and are separated from each other at the other end of the first gate

electrode group, and the second source regions are connected to each other at one end of the second gate electrode group and are separated from each other at the other end of the second gate electrode group.

5 12. A semiconductor device according to claim 11, wherein the first and second gate electrode groups are connected to each other at the other end.

13. A semiconductor device according to claim 11, wherein the second source regions are connected to each other at one end of the second gate electrode group, and
10 separated from each other at the other end of the second gate electrode group.

14. A semiconductor device according to claim 11, wherein the first and second gate electrode groups are formed in trench structures.

15 15. A semiconductor device according to claim 11, wherein each of the first and second source regions is a diffused layer formed on the semiconductor substrate.

16. A semiconductor device according to claim 11, wherein the first source contact portion and the first gate electrode group constitute one MOS transistor, and the
20 second source contact portion and the second gate electrode group constitute another MOS transistor.

17. A semiconductor device according to claim 11, wherein each of the first and second source contact portions is an electrode drawn from a source electrode, and these
25 portions are connected to each other.

18. A semiconductor device according to claim 11, wherein all the gate electrodes of the first and second gate electrode groups are used as gates for MOS transistors.

19. A semiconductor device according to claim 11, wherein the second source regions are connected to each other at one end of the second gate electrode group, and separated from each other at the other end of the second gate electrode group.

20. A semiconductor device according to claim 11, wherein the second spacing is greater than the first spacing.

10